1. (Currently amended) A method for classification of an input image in picture or graphic classes, comprising the following steps:

a) extracting an edge orientation feature from the input image;

b) processing the edge orientation feature using an algorithm associated with the feature, the algorithm is $-\sum H(x)\log H(x)$, where $H(x)$ is an edge orientation histogram;

c) comparing the result of the feature algorithm to one or more previously selected thresholds; and

d) if, according to previously determined rules, any comparison is determinative of the class of the input image, classifying the input image in either the picture or graphic classes according to the previously determined rules, otherwise indicating the result is indeterminate.

2. (Original) The method as set forth in claim 1, wherein step a) includes the following steps:

e) processing the input image to detect edges;

f) creating an edge map image showing the detected edges;

g) processing the edge map image to connect the detected edges; and

h) computing a histogram from the edge map image based on orientation of the detected edges.

3. (Currently amended) The method as set forth in claim 2, wherein step h) includes the following steps:

i) computing a two-dimensional histogram from the edge map image using the Hough transform; and,

j) processing the two-dimensional histogram using the equation $H(x) = \left(\sum HT(x,y)^2\right)^{\frac{1}{2}}$, wherein $H(x)$ is an edge orientation histogram, $HT(x, y)$ is a Hough Transform histogram that represents a length of a line, x is a line orientation, y is a line intercept, and the summation is for all y values.

4. Cancelled

5. (Currently amended) A method for classification of an input image in picture or graphic classes using a combination classifier, comprising the following steps:

a) performing a combination picture/graphics classifier on an input image using two or more features selected from the group consisting of edge features, SGLD texture features, one-dimensional color discreteness features, two-dimensional color discreteness features, and a three-dimensional color discreteness feature represented by: $\sum\left(\left|H(x,y,z)-H(x-1,y,z)\right|+\left|H(x,y,z)-H(x,y-1,z)\right|+\left|H(x,y,z)-H(x,y,z-1)\right|\right)$, where $H()$ is a 3-D color histogram and x, y and z are bin numbers; and,

b) comparing the results of the combination picture/graphics classifier for each feature selected for performance and, if one or more of the selected features is determinative of the class of the input image, classifying the input image in either the picture or graphic classes according to previously determined rules, otherwise indicating the result is indeterminate.

6. (Original) The method as set forth in claim 5, wherein the edge features in a) include at least one of an average number of pixels per connected edge feature (P/E) and an edge orientation feature (EO).

7. (Currently amended) The method as set forth in claim 5, wherein the two-dimensional color discreteness features in a) include one or more of three two-dimensional color histograms ~~discreteness features~~, each two-dimensional color histogram ~~discreteness feature~~ representing two color channels of a predetermined color space comprised of three color channels, wherein the three two-dimensional color histograms ~~discreteness features~~ represent the possible combinations of two color channels.

8. (Currently amended) The method as set forth in claim 7, wherein each two-dimensional color discreteness algorithm ~~features~~ is represented by the algorithm: $\sum\left(\left|H_{st}(x,y)-H_{st}(x-1,y)\right|+\left|H_{st}(x,y)-H_{st}(x,y-1)\right|\right)$, where H_{st} is a 2-D color histogram, x and y indicate respective bin numbers, s and t are the two color channels of the color space represented in the two-dimensional color discreteness algorithm ~~features~~.

9. (Currently amended) The method as set forth in claim 5, wherein the three-

dimensional color discreteness feature in a) represents three color channels of a predetermined color space comprised of three color channels~~, wherein the three-dimensional color discreteness feature is represented by the algorithm:~~

~~$$\sum\left(\left|H(x,y,z)-H(x-1,y,z)\right|+\left|H(x,y,z)-H(x,y-1,z)\right|+\left|H(x,y,z)-H(x,y,z-1)\right|\right).$$~~

10. (Currently amended) A method for classification of an input image in picture or graphic classes using a combination classifier, comprising the following steps:

a) performing a picture/graphics classifier on an input image using one or more edge features;

b) if the result of the picture/graphics classifier using edge features is indeterminate, performing a picture/graphics classifier on the input image using one or more one-dimensional color discreteness features;

c) if the result of the picture/graphics classifier using one-dimensional color discreteness features is indeterminate, performing a picture/graphics classifier on the input image using SGLD texture features;

d) if the result of the picture/graphics classifier using SGLD texture features is indeterminate, performing a picture/graphics classifier on the input image using one or more two-dimensional color discreteness features represented by the algorithm:

$$\sum\left(\left|H_{st}(x,y)-H_{st}(x-1,y)\right|+\left|H_{st}(x,y)-H_{st}(x,y-1)\right|\right)$$, where H_{st} is a 2-D color histogram, x and y indicate respective bin numbers, s and t are the two color channels of the color space represented in the two-dimensional color discreteness feature; and,

e) if the result of the picture/graphics classifier using two-dimensional color discreteness features is indeterminate, performing a picture/graphics classifier on the input image using a three-dimensional color discreteness feature.

11. (Original) The method as set forth in claim 10, wherein the edge features in a) include at least one of an average number of pixels per connected edge feature (P/E) and an edge orientation feature (EO).

12. (Currently amended) The method as set forth in claim 10, wherein the two-dimensional color discreteness features in d) include one or more of three two-dimensional color histograms ~~discreteness feature~~, each two-dimensional color

histogram ~~discreteness feature~~ representing two color channels of a predetermined color space comprised of three color channels, wherein the three two-dimensional color histograms ~~discreteness feature~~ represent the possible combinations of two color channels.

13. Cancelled

14. (Currently amended) The method as set forth in claim 10, wherein the three-dimensional color discreteness feature in e) represents three color channels of a predetermined color space comprised of three color channels, wherein the three-dimensional color discreteness feature is represented by the algorithm:

$$\sum\left(|H(x,y,z)-H(x-1,y,z)|+|H(x,y,z)-H(x,y-1,z)|+|H(x,y,z)-H(x,y,z-1)|\right),$$

where $H()$ is a 3-D color histogram, and x, y and z indicate respective bin numbers.

15. (Currently amended) A method for classification of an input image in picture or graphic classes using a combination classifier, comprising the following steps:

a) performing a picture/graphics classifier on an input image using one or more edge features;

b) performing a picture/graphics classifier on the input image using one or more one-dimensional color discreteness features;

c) performing a picture/graphics classifier on the input image using one or more SGLD texture features;

d) performing a picture/graphics classifier on the input image using one or more two-dimensional color discreteness features that are processed by an algorithm that includes summing the differences between 2-D color histograms, which represent two color channels, over respective bins;

e) performing a picture/graphics classifier on the input image using a three-dimensional color discreteness feature features that are processed by an algorithm that includes summing the differences between 3-D color histograms, which represent three color channels, over respective bins; and,

f) comparing the results of each picture/graphics classifier performed and, if one or more classifiers is determinative of the class of the input image, classifying the input image in either the picture or graphic classes according to previously determined rules,

otherwise indicating the result is indeterminate.

16. (Currently amended) A image processing system for producing an output image associated with an input image based on classification of the input image, comprising:

a feature extractor for extracting one or more features from the input image, wherein the two or more features are selected from the group consisting of edge features, SGLD texture features, one-dimensional color discreteness features, two-dimensional color discreteness features, and a three-dimensional color discreteness feature;

a binary classifier for classifying the input image in picture or graphic classes using the one or more extracted features, the binary classifier processes the two-dimensional color discreteness feature using a summation of the differences between 2-D color histograms, representing two color channels, over respective bins;

a picture processing module for processing the input image using picture image processing functions;

a graphic processing module for processing the input image using graphic image processing functions; and,

a switch for routing the input image for image processing by the picture processing module or the graphic processing module based on the classification of the input image by the binary classifier between picture and graphic classes.

17. (Original) The image processing system as set forth in claim 16, wherein the edge features extracted by the feature extractor include at least one of an average number of pixels per connected edge feature (P/E) and an edge orientation feature (EO).

18. (Original) The image processing system as set forth in claim 16, wherein the two-dimensional color discreteness features extracted by the feature extractor include one or more of three two-dimensional color discreteness features, each two-dimensional color discreteness feature representing two color channels of a predetermined color space comprised of three color channels, wherein the three two-dimensional color discreteness features represent the possible combinations of two color channels.

19. (Currently amended) The image processing system as set forth in claim 18,

the binary classifier further including a process for processing each two-dimensional color discreteness features using the algorithm:

$\sum\left(\left|H_{st}(x,y)-H_{st}(x-1,y)\right|+\left|H_{st}(x,y)-H_{st}(x,y-1)\right|\right)$, where H_{st} is a 2-D color histogram, x and y indicate respective bin numbers, s and t are the two color channels of the color space represented in the two-dimensional color discreteness feature.

20. (Currently amended) The image processing system as set forth in claim 16, wherein the three-dimensional color discreteness feature extracted by the feature extractor represents three color channels of a predetermined color space comprised of three color channels, the binary classifier further including a process for processing the three-dimensional color discreteness feature using the algorithm:

$\sum\left(\left|H(x,y,z)-H(x-1,y,z)\right|+\left|H(x,y,z)-H(x,y-1,z)\right|+\left|H(x,y,z)-H(x,y,z-1)\right|\right)$,

where $H()$ is a 3-D color histogram and x, y, and z are bin numbers..

21. (New) The method as set forth in claim 15, the algorithm for processing the one or more two-dimensional color discreteness feature is the following:

$\sum\left(\left|H_{st}(x,y)-H_{st}(x-1,y)\right|+\left|H_{st}(x,y)-H_{st}(x,y-1)\right|\right)$, where H_{st} is a 2-D color histogram, x and y indicate respective bin numbers, s and t are the two color channels of the color space represented in the two-dimensional color discreteness feature.

22. (New) The method as set forth in claim 15, the algorithm for processing the one or more three-dimensional color discreteness feature is the following:

$\sum\left(\left|H(x,y,z)-H(x-1,y,z)\right|+\left|H(x,y,z)-H(x,y-1,z)\right|+\left|H(x,y,z)-H(x,y,z-1)\right|\right)$,

where $H()$ is a 3-D color histogram and x, y, and z are bin numbers..